

Section 1

About the CAHSEE

Background

Education Code section 60850(a) required the State Superintendent of Public Instruction to develop a high school exit examination in language arts and mathematics in accordance with the statewide academically rigorous content standards adopted by the State Board of Education. Education Code section 60851 provides statutory authority to administer a high school exit examination and requires passage for obtaining a diploma.

Commencing with the 2003-04 school year, every graduating senior must pass the high school exit examination as a condition of receiving a high school diploma from a California public school. During the 2002-03 school year, students in grade 10 and those students in grade 11 who have not yet passed one or both parts of CAHSEE must take the test. In spring 2003, all students in grade 10 will be required to take the CAHSEE for the first time. For all students who do not pass, there will be multiple opportunities to retake one or both parts of the exam as necessary.

The State Superintendent of Public Instruction designates six testing dates a year for the CAHSEE. Testing dates are in March, May, July, September, November, and January. The specific dates are noted on the CDE website at <http://www.cde.ca.gov/statetests/cahsee>. Districts select from these dates and offer the CAHSEE at least three times a year (e.g., July, November, and March).

Purpose and Content of the CAHSEE

The purpose of the CAHSEE is to ensure that students who graduate from high school can demonstrate grade-level competency in the state content standards for reading, writing, and mathematics.

The State Board of Education has approved both grade level and specific content to be assessed on the CAHSEE. A High School Exit Examination Standards Panel, appointed by the State Superintendent of Public Instruction, reviewed the state content standards in mathematics and English language arts and recommended to the State Board which content standards students should master to receive a high school diploma. In mathematics, standards from grades 6, 7, and 8 were selected. In English language arts, the panel selected standards from grades 9 and 10 and two standards from grade 8.

The test questions on the CAHSEE assess the approved standards and cover a range of difficulty levels, consistent with good testing practices. Because the primary purpose of the examination is to determine whether or not students can demonstrate grade-level competency in reading, writing, and mathematics, many of the test questions are clustered around the difficulty level represented by the passing score. These questions assess full mastery of the designated California content standards as well as foundational knowledge and skills underlying these standards, as recommended by the High School Exit Examination Standards Panel.

For example, the ELA part of the CAHSEE includes test questions that require students to determine the meaning of words in context. This vocabulary strategy is not specifically named in the grade 9/10 content standards, but it is included on the exam because it is a foundational, underlying skill required for achievement of the grade 9/10 vocabulary standards. Similarly, most CAHSEE ELA test forms contain at least one poem. Although poetry is not specifically named in the grade 9/10 literary analysis standards, analysis of poetry is a focus of standards in the earlier grades. In mathematics, standards from grades 6, 7, and 8 are included on the CAHSEE because these grade level standards represent both foundational and competency standards that students should meet in order to graduate from high school. See Appendix E for a chart detailing the topics covered by the California content standards in reading. This document illustrates the knowledge and skills that are foundational to the standards assessed on the CAHSEE.

All questions on the examination have been evaluated for their appropriateness for measuring the designated ELA and mathematics content standards. They have been reviewed and approved by committees of California educators, including teachers, administrators, and academicians. In addition to content, all items have been reviewed and approved by California educators for their adherence to the principles of fairness and have been evaluated to determine if bias exists with respect to characteristics such as gender, ethnicity, and language.

Both parts of the CAHSEE (ELA and Mathematics) have multiple-choice questions, which consist of a question or statement followed by a set of four possible answer choices. Only one answer choice is correct, and there is no scoring penalty for guessing an answer choice incorrectly. Mathematics items may include pictorial material, such as drawings, tables, diagrams, or graphs. There are two writing tasks on the ELA part of the CAHSEE. One task requires a written response to literary or informational text, and the other requires a written response to a stand-alone writing prompt.

Each operational form of the ELA and mathematics portions of the CAHSEE also includes 12 field-test questions consisting of newly developed items for which the collection of statistical data is necessary. The field-test questions are not identified in the test booklets. These questions are selected for try-out purposes only and are not included in any individual or group student score reports.

The test blueprints for the CAHSEE indicate which content standards are to be tested and the number of items per standard. More detailed information is available on the CAHSEE website (noted on the previous pages in the Background section).

The CAHSEE is not a timed test, which means it has no fixed time limit in which students must complete the examination. However, students are expected to complete their work during the regular school day unless their Individual Educational Program (IEP) or 504 Plan specifies the need for extra time beyond the school day.

English Language Arts Content Standards

The standards for the English language arts part of the CAHSEE are taken from the California Content Standards for grades 9/10. Standards from the following strands are included: Word Analysis, Reading Comprehension, Literary Response and Analysis, Writing Strategies, Writing Conventions, and Writing Applications.

The English language arts part of the CAHSEE contains 82 multiple-choice test questions and 2 writing tasks distributed across the six strands, as shown in Table 1.

Table 1
Distribution of CAHSEE ELA Questions by Strand

| Strand | Number of Multiple-Choice Items | Number of Writing Tasks |
|--------------------------------|--|--------------------------------|
| Word Analysis | 10 | - |
| Reading Comprehension | 24 | - |
| Literary Response and Analysis | 24 | - |
| Writing Strategies | 11 | - |
| Writing Conventions | 13 | - |
| Writing Applications | - | 2 |
| Total | 82 | 2 |

Mathematics Content Standards

As mentioned above, the standards for the mathematics part of the CAHSEE are taken from the California Content Standards in grades 6, 7, and 8. They include standards from the following mathematical strands: Number Sense; Algebra and Functions; Measurement and Geometry; Statistics, Data Analysis, and Probability; Mathematical Reasoning; and Algebra 1.

The mathematics part of the CAHSEE contains 80 multiple-choice test questions distributed across the six strands as shown in Table 2.

Table 2
Distribution of CAHSEE Mathematics Questions by Strand

| Strand | Number of Multiple-Choice Items |
|--|--|
| Statistics, Data Analysis, and Probability | 12 |
| Number Sense | 14 |
| Measurement and Geometry | 17 |
| Algebra and Functions | 17 |
| Mathematical Reasoning | 8 |
| Algebra 1 | 12 |
| Total | 80 |

Development of Test Questions for the CAHSEE

The test questions that appear on the CAHSEE have been through an extensive development process to ensure that they are valid and fair measures of what students know and are able to do.

Content Validity

To ensure that the CAHSEE is a valid measure of the specified content standards, the test questions are carefully designed to assess the content indicated in the test blueprints. Insofar as possible, each question requires students to demonstrate knowledge and/or skills in only one standard. Because many content standards cover a wide range of knowledge and skills, individual test questions may assess one component of the standard. Other questions may address underlying, foundational knowledge or skills that are required for higher achievement in the standard.

Technical Quality

Well-written test questions give students an opportunity to demonstrate what they know and are able to do; students do not have to “outthink” or “outguess” what the question is asking. When questions are clearly written and easily understood, students are able to provide evidence of their learning. Test questions have only one clearly correct answer. The language is simple, direct, and free of ambiguity. Questions should not be a test of reading ability or vocabulary if that is not their purpose. CAHSEE test questions are reviewed for content validity and technical quality by committees of California educators.

Fairness

Bias in testing can take several forms, including the use of unfamiliar or insensitive language and terms, the presentation of stereotypes, and the inclusion of concepts that are offensive or negative toward any group. During the development process, CAHSEE test questions are continually reviewed for potential bias to ensure that the CAHSEE meets the highest standards of fairness in testing.

For general matters of style and grammar, CAHSEE test developers consult *The Chicago Manual of Style*, *The Gregg Reference Manual*, *Merriam Webster's Collegiate Dictionary*, and *The American Heritage College Dictionary*.

The following checklists are used by CAHSEE item writers and review committees as a basis for evaluating the content validity, technical quality, and fairness of test questions. Teachers may also use these checklists to improve their own classroom assessments. For multiple-choice questions for either English language arts or mathematics, teachers may wish to write standards-based test questions to help students prepare for the CAHSEE. The checklist in Table 3 is provided so that teachers may evaluate their own questions against the general requirements for CAHSEE multiple-choice questions. Table 4 provides some useful guidelines teachers may use for developing English language arts writing tasks.

Table 3
Development Checklist for Multiple-Choice Questions

| ✓ | Requirements |
|--------------------------------------|---|
| The test question as a whole— | |
| | Has one and only one clearly correct answer |
| | Clearly presents one central idea |
| | Measures the intended objective |
| | Has a clear purpose |
| | Is within the appropriate range of difficulty |
| | Contains simple, direct, and unambiguous language |
| | Uses age-appropriate vocabulary and sentence structure |
| | Does <u>not</u> use vocabulary and idiomatic phrases that could be unfamiliar |
| | Does <u>not</u> rely on students' possessing outside knowledge |
| | Tests worthwhile (not trivial or obscure) concepts or information |
| | Reflects current teaching practices |
| | Is <u>not</u> tricky or cute |
| | Does <u>not</u> appear to ask for the student's opinion |
| | Is grammatically correct |
| | Uses the active voice and avoids informal diction and usage |
| | Follows the appropriate style guidelines |
| | Is free of bias, sensitive language or topics, and stereotypes |

Development Checklist for Multiple-Choice Questions, continued

| ✓ | Requirements |
|--|--|
| The stem of the test question— | |
| | Gives the test taker a full sense of what the item is asking |
| | Is either a question or an incomplete statement |
| | Is both clear and concise |
| | If negative, contains no negatives in the distracters |
| The stimulus or passage for the test question(s)— | |
| | Is likely to be interesting to students |
| | Is correctly and clearly labeled |
| | Provides all the information needed to answer the questions |
| | Can be reproduced clearly in a test book |
| The response options— | |
| | Are written so that no one option is significantly different from the others in length, specificity, or complexity |
| | Relate to the stem in the same way |
| | Do <u>not</u> include an option that denies the truth of any other option |
| | Do <u>not</u> deny the truth of the stem |
| | Do <u>not</u> give clues to students, such as the use of absolutes like <i>always</i> and <i>never</i> |
| | Do <u>not</u> repeat words that could be placed in the stem |
| | Include plausible and reasonable misconceptions and errors |
| | Do <u>not</u> include as other distractors that are phrased differently but have the same meaning as other distractors |
| The set of test questions— | |
| | Includes a sufficient number of questions to justify the time required to read the stimulus or passage |
| | Contains questions that are entirely independent of each other |
| | Reflects an appropriate range of difficulty |

Table 4
Development Checklist for Writing Tasks

| ✓ | Requirements |
|------------------|---|
| The task— | |
| | Directly assesses the knowledge, skills, or abilities specified by the content standard |
| | Clearly tells students what they are being asked to do |
| | Is appropriate in scope, i.e., neither too broad nor too narrow |
| | Uses precise action verbs and descriptive words |
| | Invites and supports a range of responses |
| | Is specific about the expected level of detail required in the response |
| | Does <u>not</u> invite personal responses about students' values or beliefs |
| | Does <u>not</u> advocate a particular value that may not be common to all students |
| | Uses age-appropriate vocabulary and sentence structure |
| | Does <u>not</u> use unfamiliar vocabulary or unfamiliar idiomatic phrases |
| | Is free from problems of bias or sensitivity |
| | Is likely to be a topic of interest to students |

Test Security

One of the most significant guarantors of fairness to all students who take the CAHSEE is that passages, writing prompts, graphical materials, and test questions remain secure at all times. Individuals who circumvent or attempt to circumvent procedures to maintain test security diminish the legitimate and honest efforts of all other students and teachers to participate in the state's assessment system. The California Department of Education has the authority, according to the Education Code section 60851 (b) and (c) and the copyright statutes of the United States, to act against any individual or group of individuals who knowingly attempts to copy, duplicate, or transmit in any way, the contents of secure material from test booklets, answer documents, in whole or in part, to any other individual or group of individuals. The California Department of Education may employ procedures to maintain the test security of the CAHSEE, including but not limited to monitoring of test administration, document handling, and post-test analytic techniques such as mark discrimination analysis.

Resource Documents

The information in this Teacher Guide is based on the California content standards and the California frameworks in English language arts and mathematics. These documents may be ordered from the California Department of Education, or they may be downloaded from the CDE web site, as shown below:

The *English Language Arts Content Standards for California Public Schools, Kindergarten Through Grade Twelve* is available from the Publications Division, Sales Office, California Department of Education, P.O. Box 271, Sacramento, CA 95812-0271; 1-800-995-4099, ext. 6. It is also available at <http://www.cde.ca.gov/standards> on the Internet.

The *Mathematics Content Standards for California Public Schools, Kindergarten Through Grade Twelve* (1997) is available from the Publications Division, Sales Office, California Department of Education, P.O. Box 271, Sacramento, CA 95812-0271; 1-800-995-4099, ext. 6. It is also available at <http://www.cde.ca.gov/standards> on the Internet.

The *Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve* (1999), is available from the Publications Division, Sales Office, California Department of Education, P.O. Box 271, Sacramento, CA 95812-0271; 1-800-995-4099, ext. 6. It is also available at <http://www.cde.ca.gov/cdepress/math.pdf> on the Internet.

The *Reading/Language Arts Framework for California Public Schools, Kindergarten Through Grade Twelve* is available from the Publications Division, Sales Office, California Department of Education, P.O. Box 271, Sacramento, CA 95812-0271; 1-800-995-4099, ext. 6. It is also available at http://www.cde.ca.gov/cdepress/lang_arts.pdf on the Internet.

Glossary of Terms Used in this Guide

Answer Choices — The correct answer and the distracters in a multiple-choice test question.

Blueprint — The plan for assessment that specifies the number of questions on each test form according to strand and content standard.

Clueing — An instance in which one test question provides information that could be used to select the correct answer to another question, or an instance in which the stem in a multiple-choice question clues the correct answer.

Constructs — The underlying cognitive domains for each strand in the California content standards (e.g., conceptual understanding or problem-solving in mathematics; reading, understanding, and analyzing grade-level texts in English language arts).

Constructed-Response Item — A test question in which students are asked to supply their own response to a question rather than choose among options for a correct answer.

Distractors — Incorrect answers to a multiple-choice stem.

Field Test Questions — Test questions that are administered to students to gain information about the quality of the question. Student performance on these questions does not affect student scores.

Foundational Knowledge/Foundational Skill — For the CAHSEE, knowledge or skill that a student would be taught and be expected to know prior to taking courses in mathematics and English language arts at grades 9 and 10.

Item — A test question written in one of several possible item formats.

Item Format — The basic design of a test question (e.g., multiple-choice, constructed-response).

Key — The correct answer to a multiple-choice question.

Multiple-Choice Question — A stem plus a number of response options or answer choices (four for CAHSEE).

Response Options — The choices in a multiple-choice question, consisting of one key (correct answer) and a number of distractors (three for CAHSEE).

Scoring Guide — The rubric or protocol to follow when assigning a point value to responses to a writing task.

Specifications — The document that includes a description of how each standard is assessed on the CAHSEE.

Standard — Statement of what students should know and be able to do.

Stem — The initial part of a multiple-choice test question in which the task or premise is given. The stem may be a question, an incomplete statement, or a set of directions.

Stimulus — A picture, graph, map, chart, quotation, or other text that students are asked to interpret when answering a test item.

Strand — A category of standards that relate to each other for purposes of reporting performance on the CAHSEE.